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| 10/043,241 | 01/14/2002 | Matthias Bratz | 42044 Cont. | 1890 |
| 26474 7590 12/31/2007 NOVAK DRUCE DELUCA + QUIGG LLP 1300 EYE STREET NW SUITE 1000 WEST TOWER WASHINGTON, DC 20005 | | | EXAMINER QAZI, SABIHA NAIM | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/043,241

Applicant(s)

BRATZ ET AL.

Examiner

Sabiha Qazi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-17 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-17 and 19-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Final Office Action

Claims 10-17 and 19-23 are pending. No claim is allowed at this time. Amendments are entered.

Summary of this Office Action dated November 27, 2007

1. Information Disclosure Statement
2. Copending Applications
3. Specification
4. 35 USC § 101 Rejection
5. 35 USC § 103(a) Rejection
6. Response to Remarks and Data in specification
7. Conclusion
8. Communication

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 10-17 and 19-21 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-9 of prior U.S. Patent No. 6,482,772. This is a double patenting rejection. Presently claimed invention is drawn to a solid mixture of sulfonylurea and an alkylpolyglycoside, their preparation and method of use for controlling undesirable plant growth, same invention is claimed in US '772. The claims are EXACTLY the same.

The Applicants' concern over the processing of the terminal disclaimer has been duly noted. The Examiner directs Applicants to MPEP 1490, which states that the statutory disclaimer (filed with the Brief) must be *processed and approved* by the Certificate of Correction Branch. Examiner will withdraw this rejection when the disclaimer over the patent will be approved by the office.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole

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would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Claims 10-17 and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over KOCUR et al¹, DUPONT² and MARK et al³.

Presently claimed invention is drawn to:

A solid mixture comprising a) a sulfonylurea herbicide and

b) an alkylpolyglycoside (claim 10). The term "sulfonylurea" is very broad and contains hundreds of thousand of compounds.

KOCUR et al teaches liquid herbicidal compositions comprising a compound of the Formula (I) and an alkyl polyglycoside and at least one surfactant. KOCUR et al teaches that the surfactants mentioned can be employed advantageously in combined formulations of I with other herbicidal active substances such as sulfonylureas like DPX-L-5300 (tribenuron), thiameturon-methyl, metsulfuron-methyl, or nicosulfuron (Ishihara), where they can enhance the action of I.⁴

Instant claims differ from KOCUR et al in that KOCUR teaches the combination compound of Formula I *with* alkylpolyglycosides and sulfonylureas in liquid form, whereas the instant claims are drawn to comprising a combination of alkylpolyglycosides and sulfonylureas in solid form.

DUPONT teaches that sulfonylurea herbicides are very effective inhibitors of plant cell division and growth. They inhibit the activity of a key enzyme in plants (acetolactate synthase, or

¹ US Patent No. 5,258,358. Published November 2, 1993. See the entire document, especially Formula (I) in col. 1, lines 55-59 in col. 2, lines 29-35 in col. 3, Table 1 in col. 3 and 4, claims, and examples.

² Dupont Escort®, Oust®, Telar® Product Information Bulletin, June 1996, 4 pages. See the entire document. Filed in Applicants' PTO-1449.

³ US Statutory Invention Registration H224, published on March 3, 1987. See the entire document.

⁴ See lines 55-59 of col. 2,

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ALS) for plant cell growth.⁵ Furthermore, DUPONT teaches that Escort, Oust, and Telar (all members of the sulfonylurea family of herbicides) dispersible granules have proven to be stable when stored in their original containers at normal temperatures.⁶ DUPONT also teaches that, at pH 5 and pH 9, the hydrolysis half-life is stable.⁷

The reference does not teach specifically herbicide sulfonylurea, however, it teaches that various materials such as insecticides, insect repellents, fungicides, bactericides, herbicides, and plant growth regulators may formulated into various products for use on crops, for insect control, weed control and the like. Often, these products are applied as a dry powder or a granular material to the surface, which is desired to be treated.⁸ MALIK et al teaches a specific dispersing aid is often employed when the product is to be applied in a powder or dry form and yet a second different dispersing aid is required when the product is to be applied as a semi-solid or liquid composition. It would be advantageous to prepare a product comprising the active ingredient and to utilize a single dispersing agent without regard to whether the final use application of the product is in a liquid or solid formulation. Moreover, the desirability of using a single ingredient as a dispersing agent reduces the possibility for error given the number of chemicals, which must be compounded to prepare a herbicide or insecticide product.⁹ MALIK et al specifically mentions the usefulness of alkyl polyglycosides.¹⁰

⁵ See second paragraph on page 1.

⁶ See "Stability" paragraph on page 1.

⁷ See "Hydrolysis Half-Life Table" on page 2.

⁸ See lines 11-17 of col. 1.

⁹ See lines 29-41 of col. 1.

¹⁰ See lines 34-37 of col. 2.

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MALIK et al teaches the lower Degree of Polymerization (DP), lower alkyl chain-length materials tend to be rather water insoluble and thus are excellent for incorporation in powdered or pulverant products whereas the higher DP material are valuable in that they have substantial emulsification capacity to function as a dispersing agent in the present invention.

The reference further teaches that generally, as the number of carbon atoms aglycone portion of the molecule increases the product becomes less soluble, thereby holding the active ingredient on plant surface.

It would have been obvious to one skilled in the art at the time the invention was filed to prepare a solid composition containing sulfonylurea and alkylpolyglycosides because first sulfonylurea are excellent herbicides and are known to be stable in solid form second, alkylpolyglycosides are known to be excellent surfactant and also can be in the solid form such as granule. Third, that since both the compounds is known to exist in solid form therefore it would have been obvious to prepare a solid composition containing sulfonylurea and alkylpolyglycoside.

One skilled in the art would have been motivated at the time of invention to prepare any solid composition of any herbicides such as sulfonylureas and alkyl polyglycosides because the prior art of MALIK et al and DUPONT teach these compositions, their uses, and their process of making. The solid composition has been taught by the prior art. Therefore, one skilled in the art who needs to prepare a solid composition of herbicide sulfonylurea and polyglycosides would be able to make and/or use it because the prior art teaches such compositions and their uses. One skilled in the art would have been motivated at the time of invention to make the composition of

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alkylpolycloside and sulfonylurea herbicides as presently claimed because the KOCUR et al teaches the effective and advantageous combination of alkylglycosides and sulfonylurea herbicides and glufosinate. The instant invention is drawn to the same combination minus glufosinate, but the term "comprising" allows additional ingredients to be added. Also, the motivation is provided by KOCUR because it teaches the combined formulations sulfonylureas and polyalkylglycosides are storage-stable, undergo virtually no chemical changes, and are simple to handle.¹¹

The transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, e.g., *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1368, 66 USPQ2d 1631, 1634 (Fed. Cir. 2003) ("**Comprising**" is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.); *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 229 USPQ 805 (Fed. Cir. 1986); *In re Baxter*, 656 F.2d 679, 686, 210 USPQ 795, 803 (CCPA 1981); *Ex parte Davis*, 80 USPQ 448, 450 (Bd. App. 1948) ("**comprising**" leaves "the claim open for the inclusion of unspecified ingredients even in major amounts").

KOCUR et al teaches that the combined formulations containing sulfonylureas and polyalkylglycosides are storage-stable, undergo virtually no chemical changes, and are simple to handle.¹² **DUPONT teaches that dispersible granule is more stable.**

¹¹ See lines 29-31 in col. 3.

¹² See lines 29-31 in col. 3.

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In the absence of any criticality and/or unexpected results, the instant invention is considered *prima facie* obvious over KOCUR et al.

See KSR Supreme Court of United States Decision (Decided April 30, 2007, KSR INTERNATIONAL CO. v. TELEFLEX INC. et al. No. 04-1350) where it states that

“However, the issue is not whether a person skilled in the art had the motivation to combine the electronic control with an adjustable pedal assembly, but whether a person skilled in the art had the motivation to attach the electronic control to the support bracket of pedal assembly”. **In the present case the combination of alkylpolyglycoside and sulfonylurea in solid form as claimed would have been obvious to one skilled in the art at the time the invention was made because prior art teaches the combination of both the components as cited above.**

No unexpected results are noted.

In the light of the forgoing discussion, the Examiner’s ultimate legal conclusion is that the subject matter defined by the instant claims would have been obvious within the meaning of 35 U.S.C. 103(a).

Data in the Specification and response to Remarks

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Rejection of claims 10-17 and 19-23 are rejected under 35 U.S.C. 112, first paragraph, and second paragraphs are withdrawn because arguments are found persuasive and claims are amended.

The 101 rejection: Until the disclaimer is approved and processed by the Branch, the rejection will be maintained.

Rejection under 103 (a) rejection is maintained because arguments are not found persuasive. Following reasons apply:

The data in the specification has been considered by the Examiner. Applicant argues that "As illustrated in applicants' Table 3 on page 35 of the application, formulations which comprise SU- 1 or metsulfuron-methyl and either Lutensol® ON 30, Lutensol® ON 80, Armolem® 557, or Pluronic® PE 6400 suffer a loss in active ingredient in the range from 87 to 52% of the starting level when stored for 2 weeks at 54°C.55).

Applicant is requested to kindly explain the results presented in Table 3.

That data presented in table 3 on page 35 of the specification has been fully considered it is unclear that how the stability of mixture of sulfonylurea and alkylpolyglycoside has been calculated. The amounts of sulfonylurea are not disclosed. There is no side by side comparison (see MPEP 716.02 (e)). KOCUR et al teaches that the combined formulations containing sulfonylureas and polyalkylglycosides are storage-stable, undergo virtually no chemical changes, and are simple to handle. Additionally there is no mention of margin of error.

Since KOCUR et al teaches a liquid composition of sulfonylurea and alkylpolyglycoside and DUPONT teaches stable solid sulfonylureas and MALIK et al teaches

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that alkylpolyglycosides excellent surfactants and can be in solid form it would have been obvious combine sulfonylurea herbicide and alkylpolyglycoside in solid form and to get solid mixture.

“One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.” In re Keller, 642 F.2d 413, 208 SPQ 871 (CCPA 1981); In re Merck & Co., Inc., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). See MPEP 2145.

In absence of any criticality and/unexpected results present invention is considered, *prima facie*, obvious to one skilled in the art at the time when invention was filed.

See MPEP 716.02.

716.02 Allegations of Unexpected Results

Any differences between the claimed invention and the prior art may be expected to result in some differences in properties. The issue is whether the properties differ to such an extent that the difference is really unexpected. In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986) (differences in sedative and anticholinergic effects between prior art and claimed antidepressants were not unexpected). In In re Waymouth, 499 F.2d 1273, 1276, 182 USPQ 290, 293 (CCPA 1974), the court held that unexpected results for a claimed range as compared with the range disclosed in the prior art had been shown by a demonstration of “a marked improvement, over the results achieved under other ratios, as to be classified as a difference in kind, rather than one of degree.” Compare In re Wagner, 371 F.2d 877, 884, 152 USPQ 552, 560 (CCPA

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1967) (differences in properties cannot be disregarded on the ground they are differences in degree rather than in kind); *Ex parte Gelles*, 22 USPQ2d 1318, 1319 (Bd. Pat. App. & Inter. 1992) (“we generally consider a discussion of results in terms of differences in degree’ as compared to differences in kind’ . . . to have very little meaning in a relevant legal sense”).

716.02(e) [R-2] Comparison With Closest Prior Art

An affidavit or declaration under 37 CFR 1.132 must compare the claimed subject matter with the closest prior art to be effective to rebut a *prima facie* case of obviousness. *In re Burckel*, 592 F.2d 1175, 201 USPQ 67 (CCPA 1979). “A comparison of the claimed invention with the disclosure of each cited reference to determine the number of claim limitations in common with each reference, bearing in mind the relative importance of particular limitations, will usually yield the closest single prior art reference.” *In re Merchant*, 575 F.2d 865, 868, 197 USPQ 785, 787 (CCPA 1978) (emphasis in original). Where the comparison is not identical with the reference disclosure, deviations therefrom should be explained, *In re Finley*, 174 F.2d 130, 81 USPQ 383 (CCPA 1949), and if not explained should be noted and evaluated, and if significant, explanation should be required. *In re Armstrong*, 280 F.2d 132, 126 USPQ 281 (CCPA 1960) (deviations from example were inconsequential).

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sabiha Qazi, Ph.D. whose telephone number is 571-272-0622. The examiner can normally be reached on any business day.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter, Ph.D. can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SABIHA QAZI, PH.D.
PRIMARY EXAMINER